

# Work Order ID 84538

\*84538\*

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May-15-12 2:01:13 PM

Item ID: D206-667-203

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Crosstube Aft

Start Date: 5/15/12 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 5/15/12 Req'd Qty: 1.00 \*1\*

Customer:

Reference: rework ECN1198/11-615

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART</b> Dart Aerospace Ltd. 1270 ABERDEEN ST. HAWKESBURY ON, CANADA K6A 1K7		TC APPROVAL # 09-89 TEL: 1-518-632-8200	
P/N	D206-667-203	CHG	CHG002
DESC	Crosstube Aft High	STC	SH01-5
LOT	B36977	STC	SR01304NY
MODEL	Bell 206L/L1/L3/L4	STC	
MADE IN CANADA			

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D206-667-243	Rev C (DEO)
DSI9565	A

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-203 CHG004

12-06-13  
H. Gar MLJ 12-6-13

84538

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[illegible]

**Work Order ID 84538****\*84538\***

Page 3

May-15-12 2:01:13 PM

Item ID: D206-667-203

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Crosstube Aft

Start Date: 5/15/12 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 5/15/12 Req'd Qty: 1.00

**\*1\***

Customer:

Reference: rework - ECN1198/11-615

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
<b>*250*</b>									
Packaging	Memo	0.00							
Packaging	ENSURE ORIGINAL KIT IS IN BOX								
260	QC4- 100% Inspect kits for completeness	0.00							
<b>*260*</b>									
QC	Memo	0.00							
Quality Control									
270		0.00							
<b>*270*</b>									
Packaging	Packaging	0.00							
Packaging	Memo								
Packaging	REPACKAGE PER PPP USING NEW B/N NEW LABELS AND PAPERWORK REQ'D Identify and pack for shipping as per PPP D206-667-203 Location: _____ PPP Rev: _____								

# Picklist Print

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Page 1

Work Order ID: 84538

Parent Item: D206-667-203

Parent Item Name: Crosstube Aft

Start Date: 5/15/12

Required Date: 5/15/12

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell SkidtubesKJ/JLM  
 IPP Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec  
 IPP Rev:H 08-07-18 remove thread masking in step 12 DD verified by:EC  
 IPP Rev:I 08-12-15 add magnobond DD verified by:EC  
 IPP Rev J 09.01.06 ECN 08-562 EC verified by:DD IPP REV:K 11.08.05 PER ECN 11-615 DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D206-667-203 Crosstube Aft		Manufactured	No				Each	8.0000		1		12-6-2	
				36977									
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		2							
				51940		1							
				74565		1							
				FG063		6							
				70720		1							
				70721		1							
				74563		1							
				74564		1							
				78490		1							
				78491		1							
D3595-063-450 RUBBER CUSHION		Manufactured	No				Each	99.8095		42		12-6-3	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		80							
				82511		80							
				LG051		9.7							
				80161		9.7							
				MAT052		10.109474							
				67353		2							
				68893		6							
				70113		0.56							
				71354		0.2							
				74113		0.349474							
				75597		1							

Part Number D206-667-203  
Description CROSBY INSULATION (206L HIGH APT)

Page 1 of 1

Chc.	Date	By	Relevant Documents
001	01.02.20	DS	DR-D206-667 Rev. D
002	05.09.09	KJ	DR-D206-667 Rev. H (OEM compromise)
003	08.06.03	<del>DS</del>	DSI 9415 Rev. A (ECN 1198)
004	11.07.28	<del>DS</del>	DSI 9565 Rev. A, DED-D206-667-243 C-1 (ECN 11-615)

13. 2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-2594-2595-2596-2597-2598-2599-2600-2601-2602-2603-2604-2605-2606-2607-2608-2609-2610-2611-2612-2613-2614-2615-2616-2617-2618-2619-2620-2621-2622-2623-2624-2625-2626-2627-2628-2629-2630-2631-2632-2633-2634-2635-2636-2637-2638-2639-2640-2641-2642-2643-2644-2645-2646-2647-2648-2649-2650-2651-2652-2653-2654-2655-2656-2657-2658-2659-2660-2661-2662-2663-2664-2665-2666-2667-2668-2669-2670-2671-2672-2673-2674-2675-2676-2677-2678-2679-2680-2681-2682-2683-2684-2685-2686-2687-2688-2689-2690-2691-2692-2693-2694-2695-2696-2697-2698-2699-2700-2701-2702-2703-2704-2705-2706-2707-2708-2709-2710-2711-2712-2713-2714-2715-2716-2717-2718-2719-2720-2721-2722-2723-2724-2725-2726-2727-2728-2729-2730-2731-2732-2733-2734-2735-2736-2737-2738-2739-2740-2741-2742-2743-2744-2745-2746-2747-2748-2749-2750-2751-2752-2753-2754-2755-2756-2757-2758-2759-2760-2761-2762-2763-2764-2765-2766-2767-2768-2769-2770-2771-2772-2773-2774-2775-2776-2777-2778-2779-2780-2781-2782-2783-2784-2785-2786-2787-2788-2789-2790-2791-2792-2793-2794-2795-2796-2797-2798-2799-2800-2801-2802-2803-2804-2805-2806-2807-2808-2809-2810-2811-2812-2813-2814-2815-2816-2817-

20. 天

# **ENGINEERING CHANGE NOTICE** **DART AEROSPACE LTD**

Date: 11.07.22	Job No.: RD2352	ADR Yes/No: N	ADR Date: N/A	ECN #: 11- 615
Product No.: D206-667 / D058-676		Created By: CP	Approved By: [Signature]	
Product Name: Crossube		Checked By: [Signature]	General Manager Approval:	

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LL	11.07.28
Purchasing Coord.	Y	CL	11.08.22
Production Engineering Coord.	Y	EC/DD	11.07.28

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	Y	ED	11.07.28
Customer Technical Support	Y	SW/CK	11.08.17
Marketing	Y	MB	11.07.28
Customer Order Processing	N		

## **Reason for Change:**

Update support installation to address slipping complaints

## **Documents Affected:**

### **Release:**

- DEO D206-667-141-C-1 - DEO D407-667-145-C-1 - DSI 9565 Rev. A  
 - DEO D206-667-143-C-1 - D2891 Rev. B  
 - DEO D206-667-243-C-1 - D2892 Rev. B - DEO D058-676-141-B-1  
 - DEO D206-667-147-A-1 - DEO D206-667-247-A-1 - DEO D058-676-241-B-1

**PARTS MUST COMPLY**



**PREVIOUS PARTS SATISFACTORY**



#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	Y			
5	Update Master Document List (MDL)	Y	KJ	new format 667 Rev. L / 676 Rev. D	11.08.18
6	Update Product Compatibility Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ	EXCEPT D058-676 DED's	11.07.28
11	Update Product Specification Files	Y	KJ		11.07.28
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		11.07.28
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ		11.07.28
19	Create / Update PPP's	Y	KJ		11.07.28
20	Red Decals required?	Y	KJ		11.07.28
21	Update Document Control Database / Laminated Dwgs	N			
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		11.07.28
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		11.07.28
24					

## **Description / Action:**

- supports of affected tubes now installed with 3M 2216 & Proseal 890
- D2891-1 & D2892-1: finish removed, 3M 2216 now applied to bottom surface
- D206-667-101 @ CHG 004, D206-667-103 @ CHG 005, D206-667-107 @ CHG 002, D206-667-201 @ CHG 004, D206-667-203 @ CHG 004  
 D206-667-207 @ CHG 002, D407-667-105 @ CHG 004
- D058-676-101 @ CHG002, D058-676-201 @ CHG002
- All affected tubes in production need to be made to this latest procedure and chg #.
- Existing crosstube stock is OK and doesn't need to be reworked.
- stock D2891-1 & D2892-1 Supports need to be reworked to remove finish & 3M 2216 added, per D2891 Rev. B & D2892 Rev. B
- Add DSI to all paperwork of all affected in-progress crosstubes & all affected stock crosstubes

ECN Verified & Complete: [Signature]

Date: 11/08/24

# DART SERVICE INSTRUCTION

TO AMEND INSTRUCTIONS FOR CONTINUOUS AIRWORTHINESS ICA-D206-667 Rev. 3 OR LATER  
REF. CANADIAN STC: SH01-5  
REF. FAA STC: SR01304NY  
REF. EASA STC: EASA.IM.R.S.01179

## PURPOSE:

The supports on the following crosstubes are now installed using Proseal instead of Magnobond:

D206-667-101 @ CHG 004  
D206-667-103 @ CHG 005  
D206-667-107 @ CHG 002  
D206-667-201 @ CHG 004

D206-667-203 @ CHG 004  
D206-667-207 @ CHG 002  
D407-667-105 @ CHG 004





## CHANGE:

For the crosstubes listed above, section 32.4 of ICA-D206-667 is amended as follows. Use Figures 32-4 to 32-8 of ICA-D206-667 for further reference. For crosstubes of an earlier change number, it is recommended that if the supports are removed, the supports should be reinstalled using the procedure listed below.

### 32.4 SUPPORT INSTALLATION

- 32.4.1 Locate the area on crosstube for installation of support (ref. Figures 32-4 to 32-8 of ICA-D206-667). For D206-667-101/-103/-107/-201 and D407-667-105 crosstubes, the outward face of the support tabs should be 13.08" (332mm) from the crosstube center. For D206-667-203/-207 crosstubes, the outward face of the support tabs should be 10.03" (255mm) from the crosstube center. Ensure paint finish of crosstube is intact; touch up as required per Chapter 5 (5.3.9) of ICA-D206-667.
- 32.4.2 If present, remove any paint/primer on bottom of supports. Abrade mating surfaces of support and crosstube with 400-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.3 Ensure a layer of 3M Scotch-Weld 2216 B/A Epoxy Adhesive is on the bottom of the support. If required, either apply or touch-up support to have a 0.03" to 0.05" thick layer of adhesive over the entire mating surface. Allow supports to cure for 24 hours.
- 32.4.4 Abrade mating surfaces of support (after cure) and crosstube with 180-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.5 Apply a 0.04" to 0.07" thick layer of Proseal 890 Class B or AMS-S-8802 Class B sealant underneath applicable support and install support.
- 32.4.6 Install the clamps opposite to crosstube support as shown in Figures 32-4 to 32-8 of ICA-D206-667. Install rubber cushions underneath each clamp around the bottom circumference of the crosstube up to the crosstube centerline. Torque clamps 80-100 in-lb (9.0-11.3 Nm). It is acceptable to use smaller or larger sized MS21920-XX clamps than those listed in ICA-D206-667, ensure that after torquing the clamps per this instruction, the nuts are in safety but not bottomed out
- 32.4.7 Prior to installing crosstube on aircraft, allow supports to cure for 72 hours and recheck torque on clamps.

CANADA	
DEPARTMENT OF TRANSPORT	
AIRCRAFT CERTIFICATION	
BRANCH	
DAO # 01-O-01	
APPROVED	
BY:	
	D. SHEPHERD (DE # 02)
DATE:	11.07.20
CERT. NO.:	SH01-5
ISSUE NO.:	3

A	NEW ISSUE	CP	11.07.15
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED	ASS	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9565	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT INSTALLATION CHANGE	NTS
DATE	11.07.15	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

# DART SERVICE INSTRUCTION

**TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2**  
REF: CANADIAN STC: SH01-5  
REF: FAA STC: SR01304NY

For D206-667-101/-201/-103/-203 or D407-667-105 crosstubes at CHG 003 or later, the D2856-400-694/-773 abrasion strip has been removed, the center D2891-1 or D2892-1 support has been bonded onto the crosstube using Magnabond 6398 and D3595-063-395/-450 Rubber Cushions have been installed underneath the MS21920-20/-22 Clamps. Amend parts list of the IIN-D206-667 Section 5 and ICA-D206-667 Section 32.8 as follows:

## REMOVE:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
13	2	2	2		2	D2856-400-694	ABRASION STRIP
14				2		D2856-400-773	ABRASION STRIP

## ADD:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
24	4	4	4		4	D3595-063-395	RUBBER CUSHION
25				4		D3595-063-450	RUBBER CUSHION

To prevent the supports from shifting on the D206-667-101/-201/-103/-203 or D407-667-105 crosstubes at CHG 002 or earlier, the D2891-1/D2892-1 supports should be removed and re-installed as follows:


- 1) Follow section 32.1 of ICA-D206-667 for the removal of the crosstubes from the helicopter.
- 2) Remove the qty (2) MS21920-20/-22 clamps from the crosstube that fasten the D2891-1/D2892-1 supports to the crosstube.
- 3) Remove the D2856-400-694/-773 abrasion strip from the crosstube per section 32.5 of ICA-D206-667.
- 4) Inspect the crosstube surface underneath the support for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection of ICA-D206-667. Repair damage within acceptable limits per item 5.3.3 of the 300 hour inspection in ICA-D206-667. Touch up finish per item 5.3.9 of the 300 hour inspection.
- 5) Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- 6) Apply a 0.03" to 0.06" thick layer of Magnabond 6398 underneath the D2891-1/D2892-1 support and re-install the support on the crosstube as shown in Figure 1. Position and secure the D2891-1/D2892-1 support on the crosstube using MS21920-20/-22 Clamps. Install a D3595-063-395/-450 Rubber cushion underneath each MS21920-20/-22 Clamp. Torque clamps 80-100 in-lb. Let the D206-667-101/-201/-103/-203 or D412-667-105 crosstube assembly cure as per the Magnabond 6398 instructions before re-installing the crosstube on the aircraft.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

DATE: 08.11.06  
CERT. NO.: SH01-5  
ISSUE NO.: 3

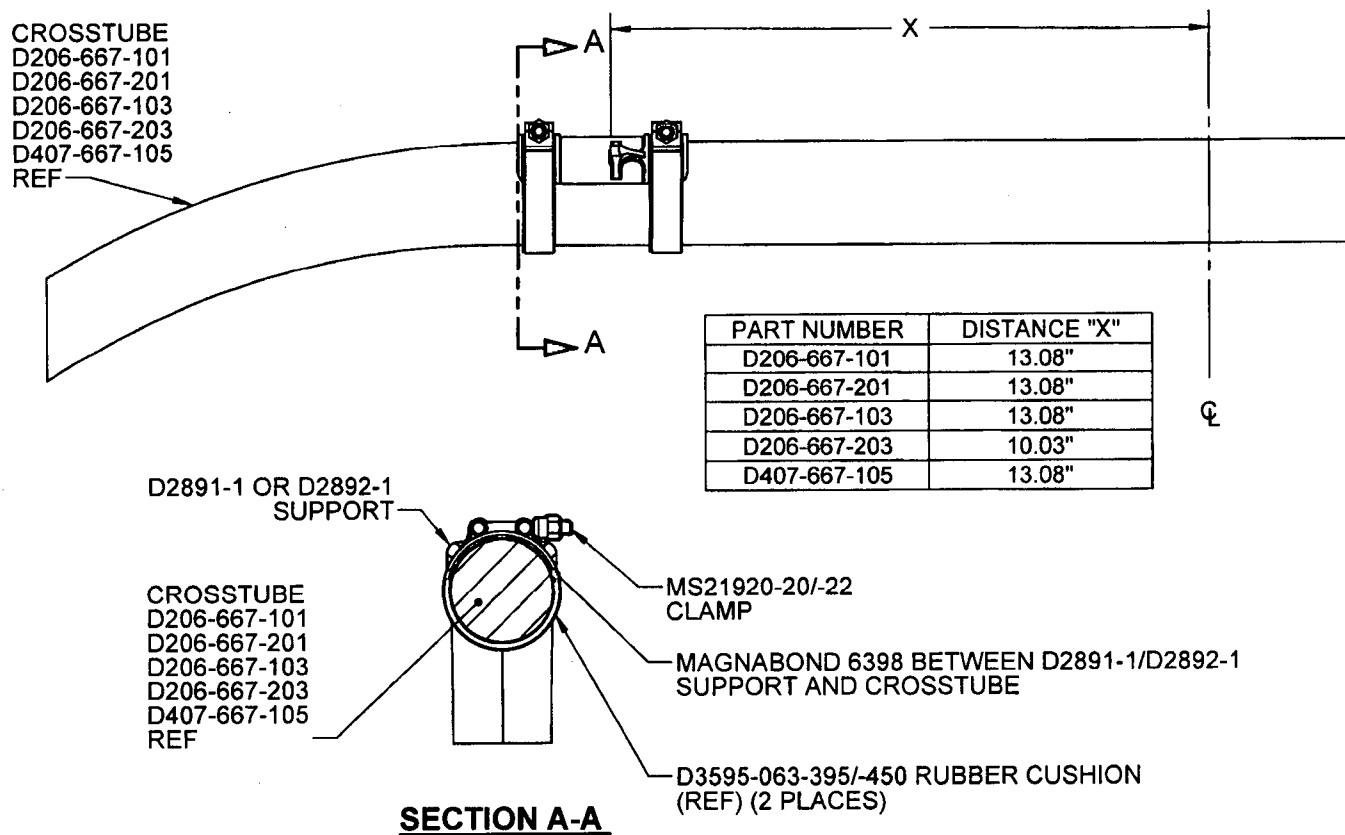
B	D3595-063-395 WAS D3595-075-395; D3595-063-450 WAS D3595-075-450	RF	08.11.06
A	NEW ISSUE	HS	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	HS	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DS	DRAWING NO.	REV: B
MFG. APPR.	N/A	DSI 9415	SHEET 1 OF 2
APPROVED	DS	TITLE	SCALE
DE APPR.		CROSSTUBE SUPPORT CHANGE	NTS
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7) Re-install the D206-667-101/-201/-103/-203 or D412-667-105 crosstube per section 32.2 of ICA-D206-667.

For customers who would like to upgrade their D206-667-101/-201/-103/-203 or D412-667-105 crosstubes from CHG 002 or earlier to CHG 003, the following kit can be obtained from Dart:

QTY -011	QTY -013	PART NUMBER	DESCRIPTION
X		DSI 9415-011	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-101/-201/-103 OR D407-667-105)
	X	DSI 9415-013	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-203)
4		D3595-063-395	RUBBER CUSHION
	4	D3595-063-450	RUBBER CUSHION



**FIGURE 1 - CROSSTUBE SUPPORT**

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

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DESIGN	HS	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DS	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9415	SHEET 2 OF 2
APPROVED	DS	TITLE	SCALE
DE APPR.		CROSSTUBE SUPPORT CHANGE	NTS
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Item	Qty	Part Number	Description
	-243		
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

# **GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6004-115  
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF: & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	RF	D206-667-243	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DE APPR.	RF	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.11.06		

DEO ATTACHED

ECO#K-G15  
11.07.26

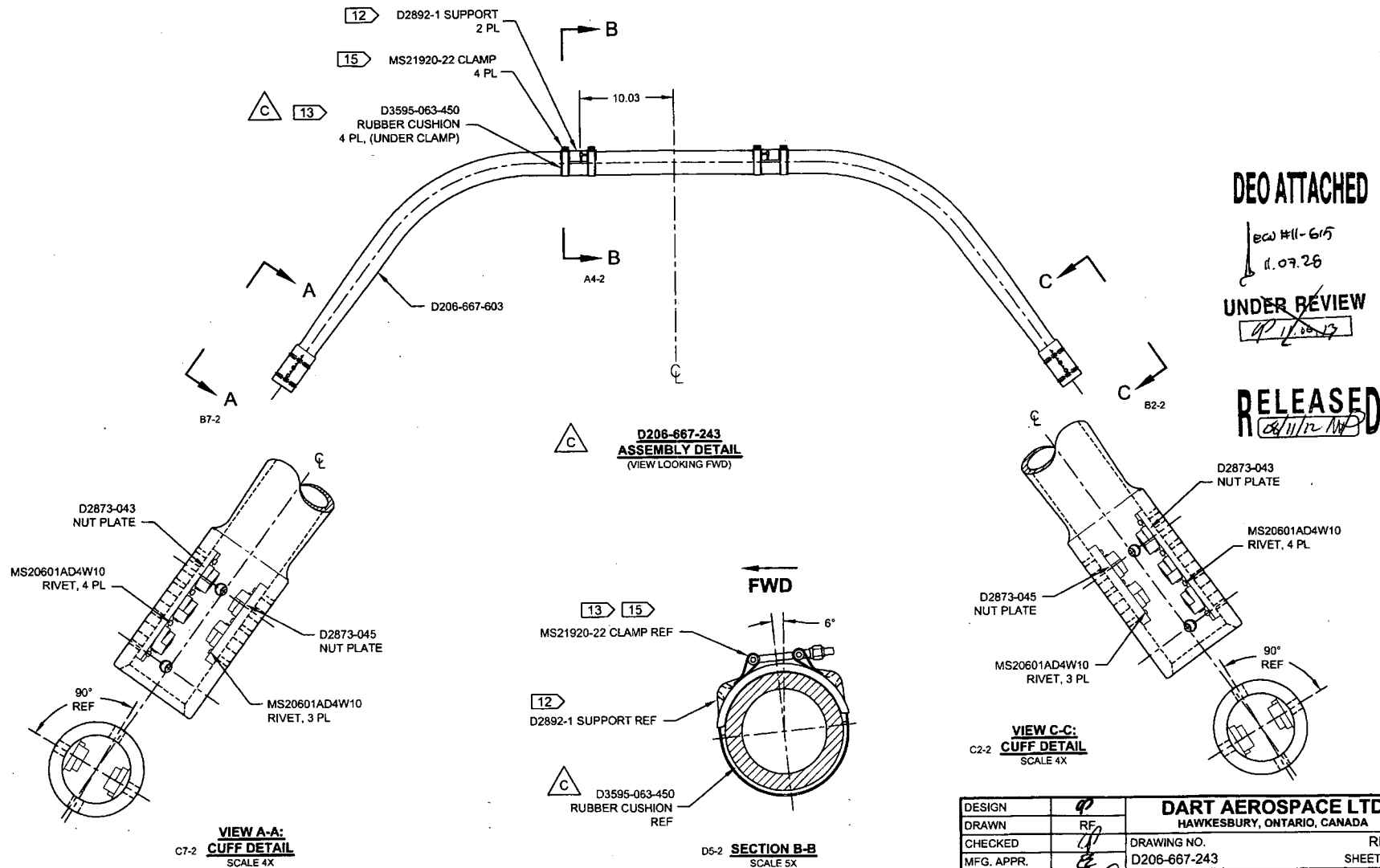
UNDER REVIEW

RELEASED  
08/11/2006

8 7 6 5 4 3 2 1

D  
C  
B  
A

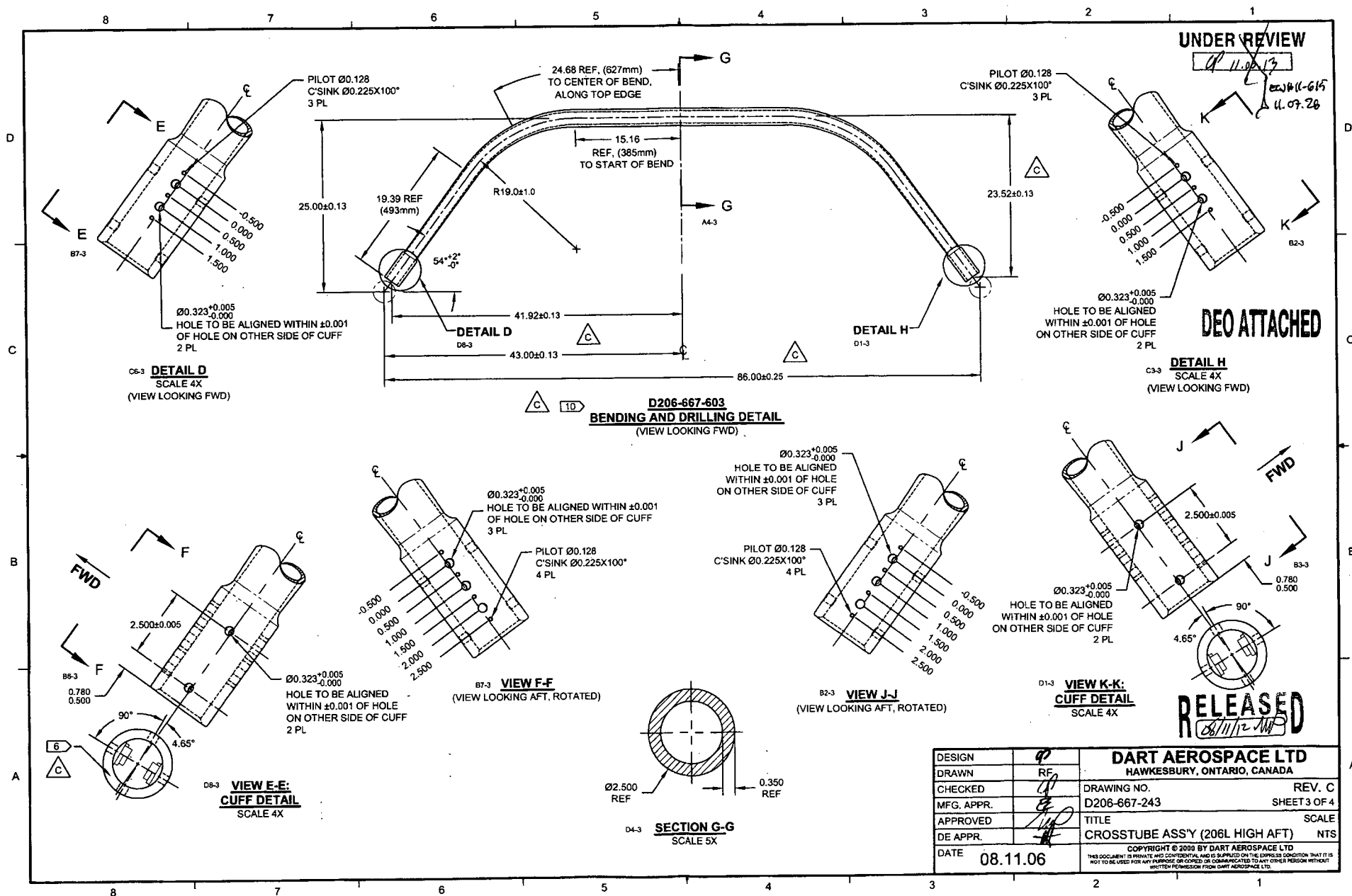
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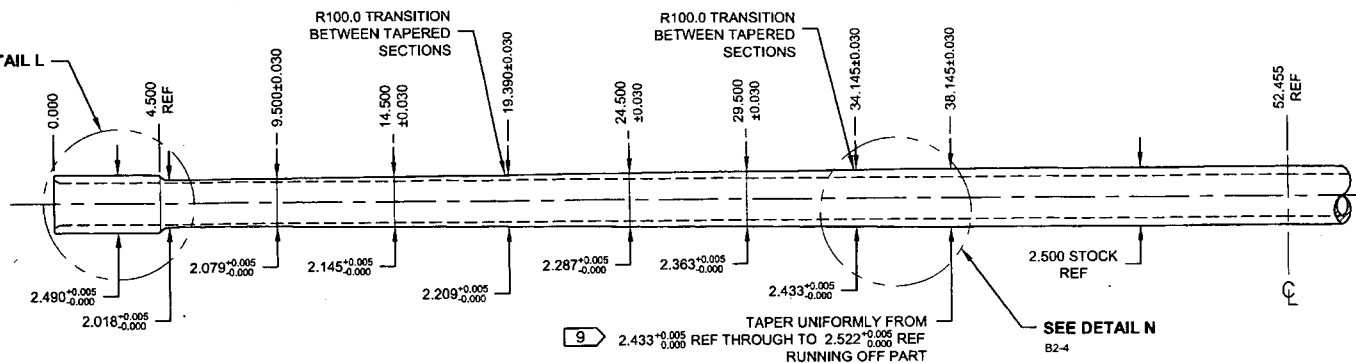
DEO ATTACHED  
ECW #11-615  
11.07.26  
UNDER REVIEW  
11.20.13  
RELEASED  
08/11/06

DESIGN	08	<b>DART AEROSPACE LTD</b>
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED	08	DRAWING NO. REV. C
MFG. APPR.	08	D206-667-243 SHEET 2 OF 4
APPROVED	08	TITLE SCALE
DE APPR.	08	CROSSTUBE ASSY (206L HIGH AFT) NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

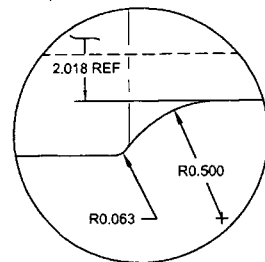
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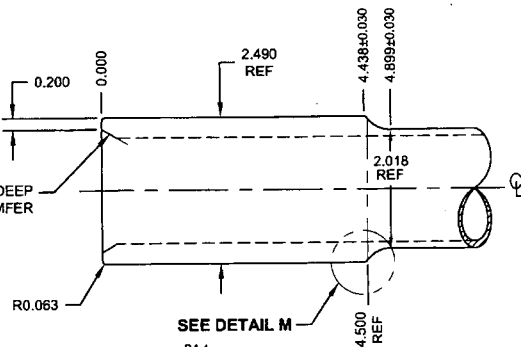
SEE DETAIL L  
B7-4



**TURNING DETAIL**

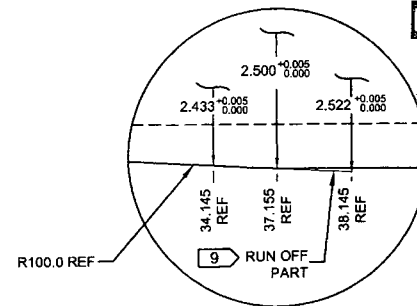


9  
30° X 0.500 DEEP CHAMFER



C7-4 **DETAIL L: CROSSTUBE CUFF**  
NOT TO SCALE

B6-4 **DETAIL M: CUFF TRANSITION**  
NOT TO SCALE



DETAIL N:  
C4-4 **TAPER RUN-OFF**  
NOT TO SCALE

BCW #11-615  
11.07.28

UNDER REVIEW

DEO ATTACHED

**RELEASED**  
08/11/2006

DESIGN	97	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	97	DRAWING NO.	REV. C
MFG. APPR.	97	D206-667-243	SHEET 4 OF 4
APPROVED	97	TITLE	SCALE
DE APPR.	97	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DRAWING NO. D206-667-243	TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D206-667-243-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 97	CHECKED ASS	MFG. APPR. [Signature]	APPROVED [Signature]		DE APPR. [Signature]		
DATE 11.07.15	DATE 11.07.20	DATE 11.07.21	DATE 11/07/21		DATE 11.07.21		

**PURPOSE:**

REPLACE MAGNOBOND WITH PROSEAL.

**CHANGE:**

**IS:**

Item	Qty -243	Part Number	Description
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

**WAS:**

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
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NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

**IS:**

- 12) TO INSTALL D2892-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. **PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.**

**WAS:**

- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.08" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

**RELEASED**  
2011-07-28  
[Signature]